

# Pomona Valley ITS Project

# Project Deliverable 4.1.3c Individual City Report -City of Industry



May 1, 2002









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#### **PROJECT DESCRIPTION**

The County of Los Angeles, in cooperation with the cities within the Pomona Valley, has determined that development of an Intelligent Transportation System (ITS) in the Pomona Valley would help to reduce congestion, enhance mobility, provide traveler information during non-recurring and event traffic congestion, and manage event traffic. The Pomona Valley Intelligent Transportation Systems (PVITS) project was conceived as a recommendation from the Pomona Valley Feasibility Study completed by the MTA in 1995. The ultimate objectives of the Project are to:

- Improve mobility by optimizing traffic management on arterials and freeways;
- Enhance Route 60 capacity by better coordinating freeway traffic with parallel arterials;
- Improve agency efficiency by coordinating management of operations and maintenance efforts among and between agencies; and
- Increase agency staff productivity by providing low-maintenance, high-quality communications and computational tools to assist in daily management and coordination activities.

#### PURPOSE OF REPORT

The Conceptual Design of the Pomona Valley ITS project includes the preparation of a Stakeholder Operational Objectives Report that summarizes each project stakeholder's needs, objectives, and issues to consider in the planning, design, and implementation of advanced technologies for traffic control, traffic management, and traveler information systems. This Individual City Report document provides a summary of existing, planned (already approved), and desired transportation projects and policies within the City of Industry. This summary is based upon information in the 1995 Pomona Valley Forum Signal Synchronization Study, with updates to the information based upon city input from recent surveys and coordination meetings. Separate reports of data summaries and stakeholder objectives have been created for each Pomona Valley City within the project area.

This report provides the following information for the City of Industry:

- Section 1.0: Definition and overview of the study area
- Section 2.0: Existing, planned, and desired traffic control and communications infrastructure
- Section 3.0: Current issues and desired aspects of operations and maintenance
- Section 4.0: Current issues and desired aspects of interagency coordination

Figures illustrating the locations of existing and planned traffic control equipment and congestion issues are included in Appendix A. A list of all current and planned signalized intersections on study area arterials is included in Appendix B.

The Stakeholders Operational Objectives Report (Deliverable 4.1.2) is a separate document that will be developed as part of this project. It will provide more specific detail on the ideal operational characteristics of the PVITS equipment and user interfaces.







#### 1.0 INDUSTRY STUDY AREA CHARACTERISTICS

The study area for Industry utilized information from a definition of roadway "significance" that was defined in the 1995 Pomona Valley Forum Signal Synchronization Study. This determination of roadway significance utilized roadway Average Daily Traffic (ADT) levels and Level of Service (LOS) ratings, along with other factors such as roadway inclusion in the Congestion Management Program (CMP), the number of transit routes utilizing the roadway, and local agency preference.

#### 1.1 Study Arterials

**Table 1** provides a summary of the arterials considered as "regionally significant" within Industry, along with the major factors for prioritization that were utilized in the 1995 Synchronization Study. Areas within the City of Industry, and unincorporated areas of Los Angeles County within the Industry corridor, were included in the study area to allow for an adequate contiguous study area.

The list of study arterials for The City of Industry includes regionally significant arterials, as well as north-south streets that connect these arterials to the 60 freeway. These connecting streets are included in the study area due to their inclusion in the Route 60 Feasibility Study Report for ITS functions in the SR-60 freeway corridor. This Feasibility Study is a separate document under this project.

TABLE 1: STUDY AREA ARTERIAL SUMMARY					
Street	Average Daily Traffic *	Number of Transit Routes	CMP Arterial		
Regionally Significant Arterials					
Valley Boulevard	25,265 - 26,945	1	YES		
Gale Avenue / Walnut Drive	11,000 - 29,000	3	NO		
Colima Road / Golden Springs Drive	35,517 - 46,341	3	YES		
Other Study Arterials **					
Hacienda Boulevard	43,000 - 51,000	1	NO		
Azusa Avenue	28,000 - 48,000	2	YES		
Fullerton Road	16,296	0	NO		
Nogales Street	30,000 - 38,000	0	NO		
Fairway Drive	21,482 - 40,509	0	NO		
Lemon Avenue	17,027	0	NO		
Brea Canyon Road	13,968	0	NO		
Grand Avenue	28,394	0	YES		

Source: Kimley-Horn and Associates, Inc., 2001

<sup>\*</sup> Numbers are factored to 2001 current conditions from available 1995 data.

<sup>\*\*</sup> These north-south roadways provide access between the 60 freeway and the regionally significant roadways.







The locations of all study area arterials are illustrated in **Figure 1** of Appendix A.

#### Transit Availability

Table 1 also indicates transit availability along the study arterials. Many of the transit lines in the study area connect to Puente Hills Mall, at the intersection of Azusa Avenue / Colima Road. Valley Boulevard is served by one transit line, along its segment within the Industry area. This line is the Los Angeles County MTA Line 484, which provides local/express service (via the I-10 Busway) between Pomona and downtown Los Angeles.

The Gale Avenue / Walnut Drive corridor is served by a combination of three different transit lines between 7<sup>th</sup> Street and Azusa Avenue:

- Foothill Transit Line 276 serves the corridor between 7<sup>th</sup> Street and Azusa Avenue, on its route between San Dimas, West Covina, and the Puente Hills Mall.
- Foothill Transit Line 482 serves the corridor east of Hacienda Boulevard, on its route between Pomona, the Puente Hills Mall, and downtown Los Angeles via the I-10 Busway.
- MTA Line 471 serves the corridor between Azusa Avenue and Hacienda Boulevard, on its route between Puente Hills Mall and Whittier. East of Azusa Avenue, the Gale Avenue / Walnut Drive corridor has no transit service.

The Colima Road / Golden Springs Road corridor is also served by Foothill Transit Line 482, east of Puente Hills Mall, and two other lines. Foothill Transit Lines 493 and 495 operate as a joint express line, with differing eastern termini. Both lines serve the corridor during the peak commute periods from the Diamond Bar area to Puente Hills Mall, then utilize Azusa Avenue and the I-10 Busway to reach downtown Los Angeles:

- Foothill Transit Line 495 originates at the Diamond Bar Park-and-Ride, then utilizes the corridor to reach Puente Hills Mall and the remainder of the route
- Foothill Transit Line 493 originates in Phillips Ranch, then joins the corridor at the eastern end of Golden Springs Road.

Hacienda Boulevard is served by Foothill Transit Line 185, on its route between Hacienda Heights, West Covina, and Azusa. Azusa Avenue is utilized by Lines 493 and 495 in order to travel between the I-10 and the Colima Road corridor, but these lines do not serve stops on Azusa Avenue. Two local lines of Foothill Transit serve stops on Azusa Avenue:

- Foothill Transit Line 280 serves Azusa Avenue between the Puente Hills Mall and the city of Azusa.
- Foothill Transit Line 486 serves Azusa Avenue between the Puente Hills Mall and Amar Road, on its route to Baldwin Park and Los Angeles.

#### Roadway Descriptions

The following text summarizes the characteristics of each of study area arterial within the Industry area.

<u>Valley Boulevard:</u> This major four-lane roadway provides east-west access, paralleling the 60 freeway, across Industry from the city limits of Pomona on the east, to the city limits of El Monte on the west. It crosses all of the major north-south roadways included in the study area. The roadway has a full-access interchange with the I-605 freeway, on the west side of Industry.







<u>Colima Road / Golden Springs Road:</u> These two roadways constitute a major east-west four-lane roadway. The roadway name changes at the boundary between unincorporated Los Angeles County and the City of Diamond Bar. In Diamond Bar, the roadway is named Golden Springs Road, while within the County areas to the west of Diamond Bar the roadway is named Colima Road. The roadway corridor lies south of the 60 freeway, connecting all north-south study area roadways between Grand Avenue in Diamond Bar and Azusa Avenue in the Rowland Heights community of Los Angeles County. West of Rowland Heights, the roadway turns south into the Whittier area.

<u>Gale Avenue / Walnut Drive</u>: These two roadways form a continuous east-west corridor through most of the study area. Walnut Drive lies east of Nogales Street, while Gale Avenue lies west. These two roadways constitute the closest parallel route to the 60 freeway. It provides a bypass route between the Fairway Drive and 7<sup>th</sup> Avenue interchanges of the 60 freeway. It also links with the Brea Canyon interchange of the 60 freeway via Lemon Avenue and Lycoming Street.

<u>Azusa Avenue:</u> This six-lane north-south roadway provides north-south access and is designated as a state highway (Route 39) through the middle of the study area. At the northern end, the state right-of-way has been relinquished to the City of West Covina. The roadway is fully grade-separated at its intersection with Valley Boulevard.

<u>Hacienda Boulevard</u>: This north-south roadway provides access within the study area between Valley Boulevard, Gale Avenue, and the 60 Freeway. The roadway is the next major roadway to the west of Azusa Avenue.

<u>Fullerton Road, Nogales Street, Fairway Drive, Lemon Avenue, and Brea Canyon Road:</u> These four roadways provide north-south access within the study area between Valley Boulevard, Gale Avenue, and the 60 Freeway.

<u>Grand Avenue:</u> This four-lane roadway provides north-south access at the east end of the Industry study area. It also provides direct freeway access to both the 57 and 60 freeways, at the two freeways joint right-of-way.

Existing truck route designations within the study area are illustrated in Figure 2 of Appendix A.

#### 1.2 Traffic Congestion

This section provides an overview of congestion issues on the study area arterials and intersections. **Figure 3** in Appendix A illustrates the Average Daily Traffic levels of the study area arterials, and the Level of Service (LOS) of the study area intersections.

The coordination meetings and general correspondence with City of Industry staff provided congested areas within Industry. **Figure 4** in Appendix A illustrates congested areas of the city based upon information gained from the coordination meetings. Two specific areas of concentrated congestion are:

- The signalized intersections of Gale Avenue / Azusa Avenue and Gale Avenue / Hacienda Boulevard which are manually controlled (phase progression) during holidays by the Police Department
- Fullerton Road, between the SR 60 interchange and Valley Boulevard. This congested corridor includes the Union Pacific grade crossing, just north of Gale Avenue.







Traffic counts were made at congested points within the Industry study area, in order to gather updated Level of Service (LOS) data at these areas. Congestion as defined in this report, does not rely only on average congestion values such as LOS, but also on sporadic congestion caused by special event traffic and heavily used railroad grade crossings. **Table 2** below indicates the LOS of selected intersections within the Industry study area. The a.m. peak LOS of the Fullerton Road / Valley Boulevard intersection, indicated in bold, is at an unacceptable LOS of 'E'. This intersection, and the intersection of Fullerton Road / Gale Avenue, are both at LOS D in the p.m. peak period, near unacceptable levels.

TABLE 2: LEVEL OF SERVICE (LOS) OF SELECTED INTERSECTIONS, INDUSTRY STUDY AREA			
Intersection	AM Peak Period LOS	PM Peak Period LOS	
Fullerton Road / Valley Boulevard	E	D	
Fullerton Road / Gale Avenue	В	D	
Fullerton Road / SR 60 westbound on-ramp	A	A	
Grand Avenue / Valley Blvd.	С	С	
Golden Springs Road / SR 60 eastbound ramp	В	В	

LOS values are based upon intersection turn movement counts conducted during the week of June 25, 2001. Data was analyzed utilizing the 1997 Highway Capacity Manual method.

#### 2.0 TRAFFIC CONTROL AND MONITORING SYSTEM

This section provides an overview of the existing and planned roadway and traffic control system. This control system represents the core infrastructure from which an ITS system can be conceptualized.

**Figure 5** in Appendix A indicates the existing traffic signal control equipment locations on the study area arterials. **Appendix B** provides a list of the locations of these traffic signals.

Many of the roadway improvements under construction and planned for the Industry area are being funded by the Alameda Corridor East Construction Authority. This agency is improving grade crossings along certain railroad corridors in the San Gabriel and Pomona Valleys, in order to reduce the impacts from increased rail freight traffic expected with the opening of the Alameda corridor port-related rail improvements. **Figure 6** in Appendix A indicates the locations of all Alameda Corridor East improvements within the Industry study area. The following are current and planned roadway issues documented by City staff:

#### **Existing System**

- There is a grade separation planned for the Union Pacific crossing on the south side of the Valley Boulevard / Nogales Street intersection.
- To create the Valley Boulevard / Nogales Street undergrounding, the intersection of Nogales Street / Railroad Street (between Valley Boulevard and the SR 60) will be removed.







- The City will be pursuing the widening of Gale Avenue in the vicinity of Nogales Street.
- The 7<sup>th</sup> Avenue / Valley Blvd. Union Pacific crossing will be grade separated during Alameda Corridor East improvements. The southern Union Pacific crossing grade separation on 7<sup>th</sup>, closer to the SR 60, has been completed.

The City is supportive of an ITS system in their jurisdiction. The City understands that freeway traffic currently uses the major east-west streets in the study area as freeway bypass routes. Providing improved traffic flow and higher capacity would be welcome. The City feel that support for better management of traffic on Gale Avenue and Walnut Drive is necessary because they recognize its use as an alternate during recurring and non-recurring congestion. On its eastern end, such an alternate route could utilize Business Parkway and Currier Road via Brea Canyon Road from the 60 freeway.

#### 3.0 OPERATIONS AND MAINTENANCE ISSUES

There are no significant operations or maintenance issues indicated by the City of Industry.

## 4.0 INTERAGENCY AND LOCAL CITY ISSUES

There are no significant interagency or local issues indicated by the City of Industry.

#### 5.0 NEXT STEPS

The information summarized within this document will be utilized to formulate the Stakeholders and Operational Objectives Report (Deliverable 4.1.2). This document will provide a project-wide evaluation of stakeholder needs and wishes, and provide a basis for the Requirements Analysis under Task 5 of this project. The Stakeholders and Operational Objectives Report will provide the following analyses of PVITS project implementation, from information summarized in the Individual City Reports:

- Anticipated benefits to stakeholders
- Potential cost implications to stakeholders
- Potential impacts on local agency staffing and operation
- Potential impacts on local agency management and maintenance costs

Deliverables from the Addendum Report, Route 60 Feasibility Study, and the Fairplex Traffic Management Plan efforts will also be incorporated into the Requirements Analysis task, and into tasks beyond this, such as the Concept of Operations and Alternatives Analysis.







## Appendix A

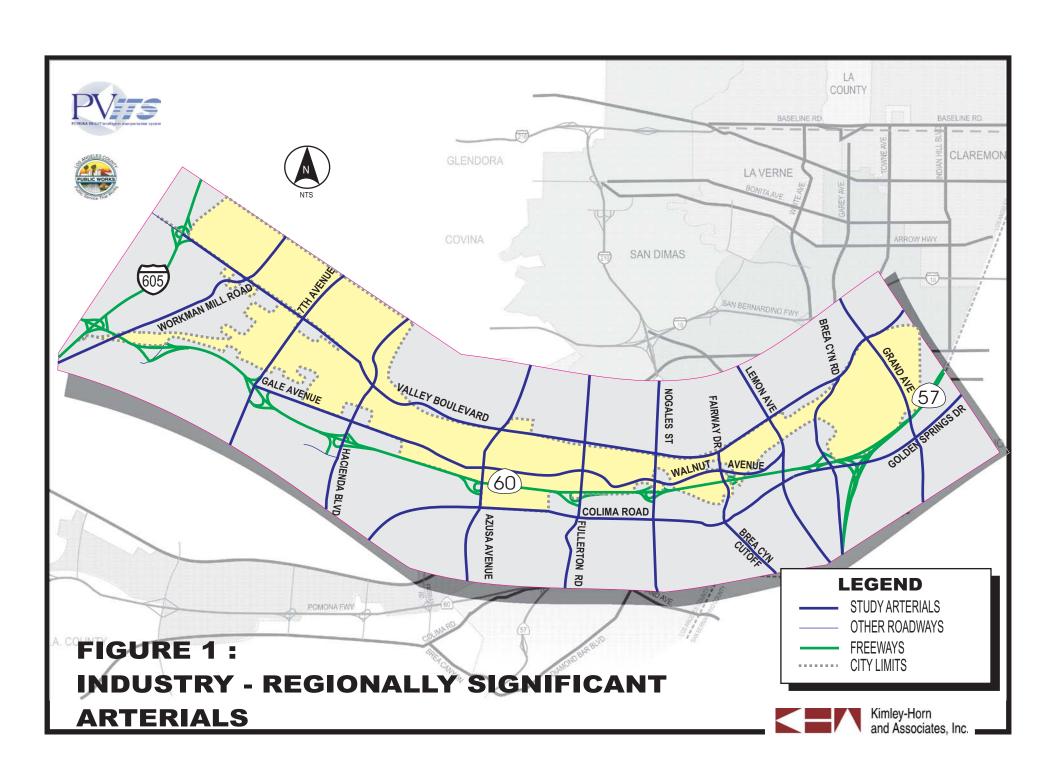
Figure 1: Regionally Significant Arterials

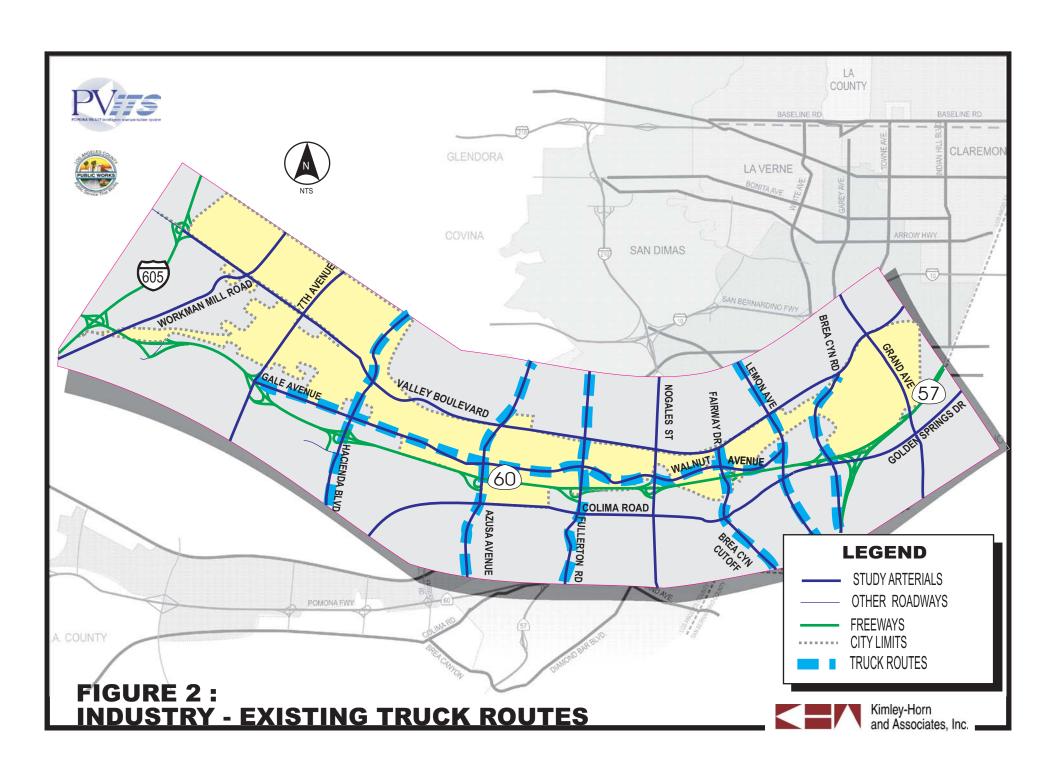
Figure 2: Existing Truck Routes

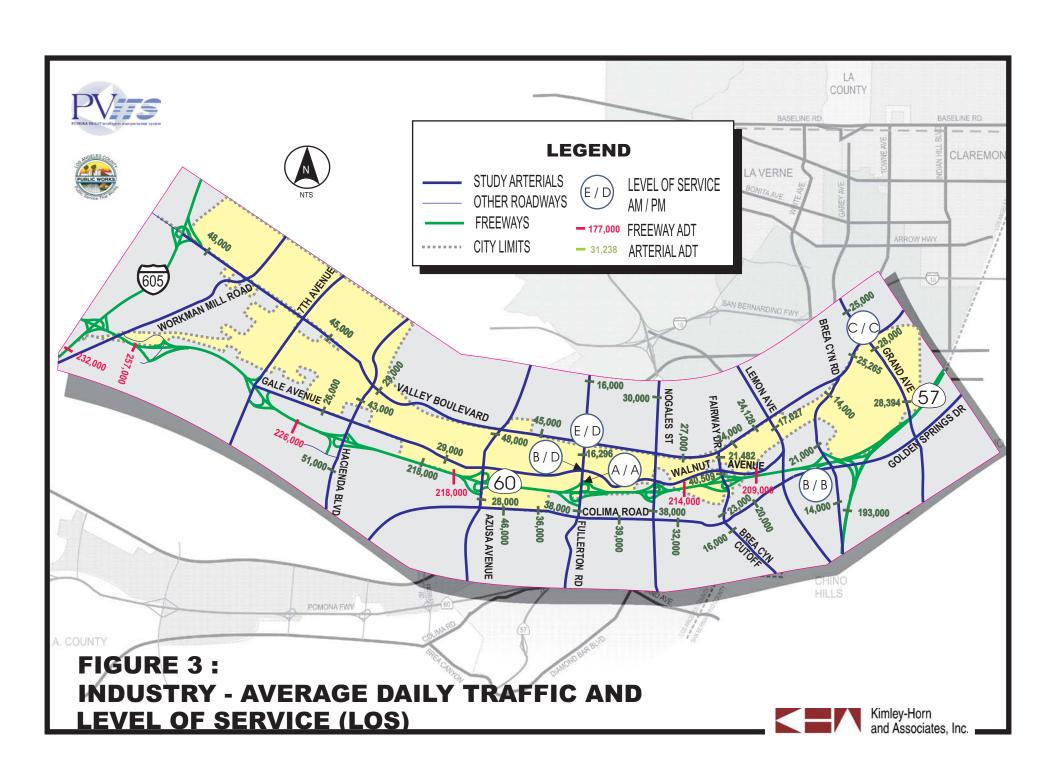
Figure 3: Average Daily Traffic and Level of Service (LOS)

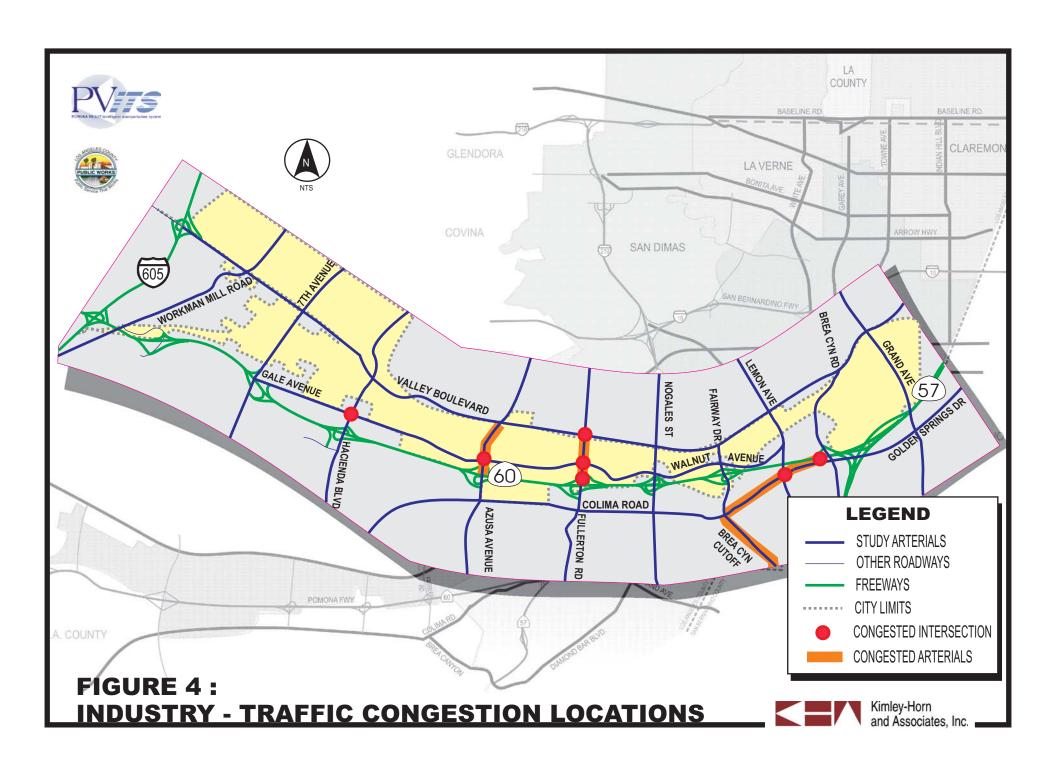
Figure 4: Traffic Congestion Locations

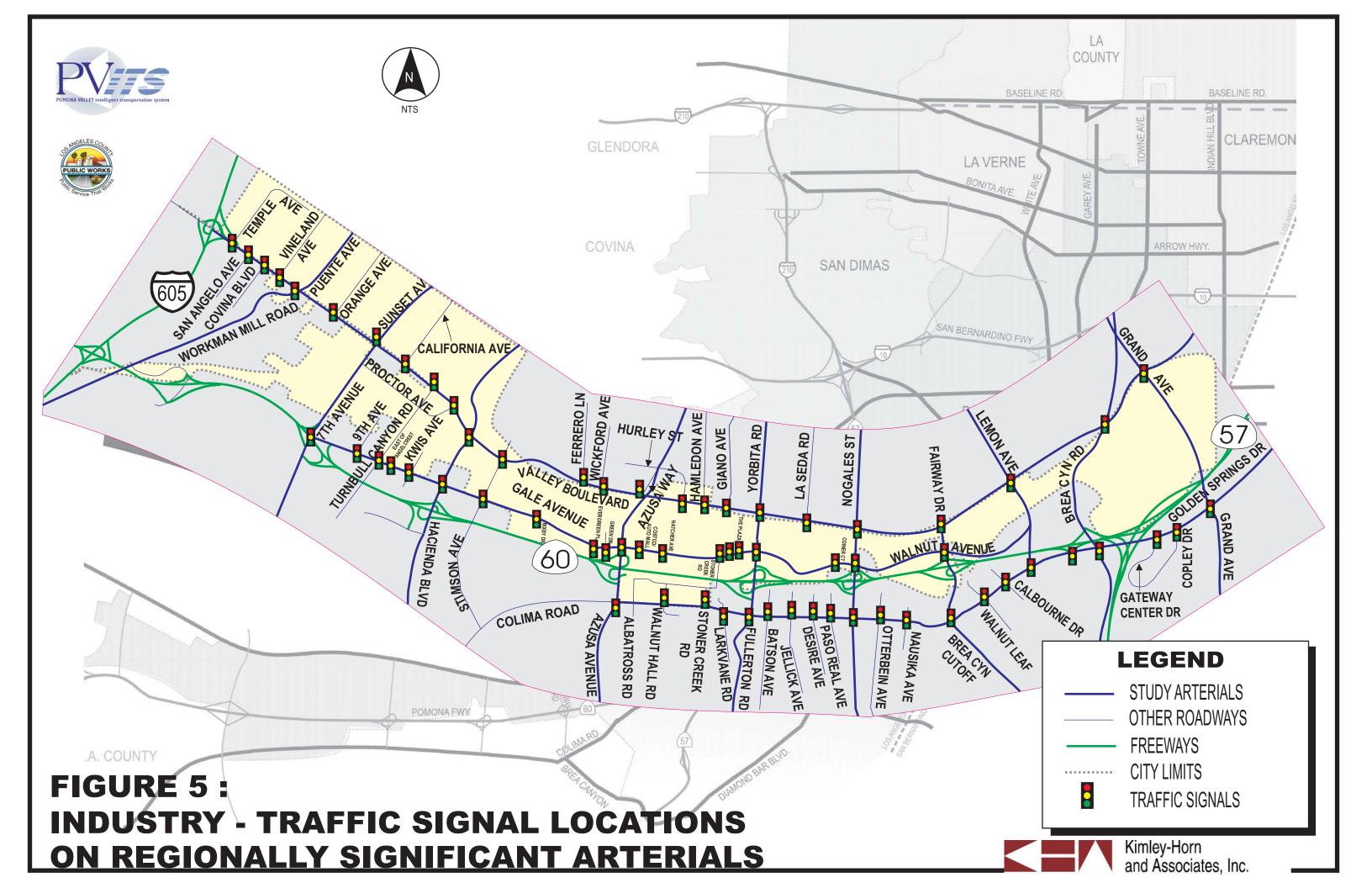
Figure 5: Traffic Signals on Regionally Significant Arterials

















# Appendix B

TRAFFIC SIGNAL EQUIPMENT			
ON REGIONALLY SIGNIFICANT A	RTERIALS	WITHIN INDUSTRY	
Signalized Intersection	Phases *	Ownership	
7 <sup>th</sup> Avenue /Clark Avenue	-	City of Industry & L.A. County	
7 <sup>th</sup> Avenue /Don Julian Road	2	City of Industry	
7 <sup>th</sup> Avenue /Proctor Avenue		City of Industry & L.A. County	
7 <sup>th</sup> Avenue /Salt Lake Avenue	-	City of Industry	
Azusa Avenue / 60 Fwy. Westbound ramps	4	Caltrans	
Azusa Avenue / 60 Fwy. Eastbound ramps	4	Caltrans	
Azusa Avenue / Anaheim and Puente Road	-	City of Industry	
Azusa Avenue / Gale Avenue	6	City of Industry	
Azusa Avenue / Hurley Street	4	City of Industry	
Azusa Avenue / Pepperbrook Way	5	City of Industry	
Azusa Avenue / Railroad Street	5	City of Industry	
Brea Canyon Road / 60 Fwy. Westbound ramps	4	Caltrans	
Brea Canyon Road / Currier Road	6	City of Industry & L.A. County	
Brea Canyon Road /Lycoming Street	-	City of Diamond Bar	
Brea Canyon Road /Washington Street	-	City of Diamond Bar	
Colima Road / Albatross Road	6	City of Industry & L.A. County	
Colima Road / Azusa Avenue	6	City of Industry & L.A. County	
Colima Road / Batson Avenue	-	L.A. County	
Colima Road / Brea Canyon Cutoff / Fairway Drive	-	L.A. County	
Colima Road /Desire Avenue	-	L.A. County	
Colima Road / Fullerton Road	6	L.A. County	
Colima Road / Jellick Avenue	-	L.A. County	
Colima Road /Larkvane Road	-	L.A. County	
Colima Road / Nausika Avenue	-	L.A. County	
Colima Road / Otterbein Avenue	-	L.A. County	
Colima Road / Paso Real Avenue	-	L.A. County	
Colima Road / Stoner Creek Road	2	City of Industry	
Colima Road / Walnut Hall Road	3	City of Industry	
Colima Road / Walnut Leaf Drive	-	L.A. County	
Fairway Road / 60 Fwy. Westbound ramps	4	Caltrans	
Fairway Road / 60 Fwy. Eastbound ramps	4	Caltrans	
Fairway Road / Business Parkway	-	City of Industry & L.A. County	
Fairway Road / North Walnut Drive	-	City of Industry & L.A. County	
Fairway Road / South Walnut Drive	-	City of Industry & L.A. County	
Fullerton Road / 60 Fwy. Westbound ramps	4	Caltrans	
Fullerton Road / 60 Fwy. Eastbound ramps	4	Caltrans	
Fullerton Road / Los Palacios Drive	-	L.A. County	
Fullerton Road / Railroad Street	4	City of Industry	
Fullerton Road / Rowland Street	3	City of Industry	
Gale Avenue / (East of) Angelcrest Drive	-	City of Industry & L.A. County	
Gale Avenue / (East of) Stoner Creek Road	-	City of Industry	
Gale Avenue / Bixby Drive	2	City of Industry	







Side to				
TRAFFIC SIGNAL EQUIPMENT				
	ON REGIONALLY SIGNIFICANT ARTERIALS WITHIN INDUSTRY			
Signalized Intersection	Phases *	Ownership		
Gale Avenue / Coiner Court	-	City of Industry & L.A. County		
Gale Avenue / Evergreen Place	4	City of Industry		
Gale Avenue / Fullerton Road	4	City of Industry		
Gale Avenue / The Plaza Driveway	2	City of Industry		
Gale Avenue / Green Drive	-	City of Industry		
Gale Avenue / Hatcher Avenue	4	City of Industry		
Gale Avenue / Kwis Avenue	4	City of Industry & L.A. County		
Gale Avenue / Costco Shopping Center/ Auto Mall	4	City of Industry		
Gale Avenue / Ninth Avenue	-	L.A. County		
Gale Avenue / Seventh Avenue	2	City of Industry		
Gale Avenue / Stimson Avenue **	2	City of Industry & L.A. County		
Gale Avenue / Stoner Creek Road **	2	City of Industry		
Gale Avenue / Turnbull Canyon Road	2	City of Industry & L.A. County		
Golden Springs Drive / 60 eastbound ramps	2	City of Diamond Bar		
Golden Springs Drive /Calbourne Drive	-	City of Diamond Bar		
Golden Springs Drive / Copley Drive	4	City of Diamond Bar		
Golden Springs / Lemon Avenue	6	City of Diamond Bar		
Golden Springs Drive / Gateway Center Drive	4	City of Diamond Bar		
Golden Springs Drive / Grand Avenue	8	City of Diamond Bar		
Grand Avenue / 57 south & 60 west ramps	4	Caltrans		
Grand Avenue / 57 north & 60 east ramps	4	Caltrans		
Hacienda Boulevard / 60 Frwy ramp	4	Caltrans		
Hacienda Boulevard / Gale Avenue	6	City of Industry		
Hacienda Boulevard / Don Julian Road	6	City of Industry		
Hacienda Boulevard / Nelson Avenue	-	Cities of Industry & La Puente		
Hacienda Boulevard / Stafford Street **	5	City of Industry & L.A. County		
Hacienda Boulevard / Three Palms Street (SR 60)	-	L.A. County		
Lemon Avenue / Business Parkway / Currier Road	4	City of Industry		
Lemon Avenue / Golden Springs Drive	-	City of Diamond Bar		
Lemon Avenue / Paseo Del Prado	-	City of Walnut		
Nogales Street / Arenth Avenue **	2	City of Industry		
Nogales Street / Colima Road	6	L.A. County		
Nogales Street / Daisetta Street	-	L.A. County		
Nogales Street / 60 Fwy. Eastbound ramps	4	Caltrans		
Nogales Street / Gale Avenue / Walnut Drive	-	City of Industry & L.A. County		
Nogales Street / La Puente Road	-	L.A. County & City of La Puente		
Nogales Street / Northam Street	-	L.A. County		
Nogales Street / San Jose Avenue ***	2	City of Industry & L.A. County		
Nogales Street / 60 Fwy. Westbound ramps	4	Caltrans		
Valley Boulevard / Azusa Way	6	Cities of Industry & La Puente		
Valley Boulevard / Brea Canyon Road	3	City of Industry & L.A. County		
Valley Boulevard / Covina Boulevard	-	City of Industry & L.A. County		
Valley Boulevard / California Avenue	6	City of Industry & La Puente		
Valley Boulevard / Giano Avenue	-	City of Industry		
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TRAFFIC SIGNAL EQUIPMENT				
ON REGIONALLY SIGNIFICANT ARTERIALS WITHIN INDUSTRY				
Signalized Intersection	Phases *	Ownership		
Valley Boulevard / Fairway Drive	6	Cities of Industry & Walnut		
Valley Boulevard / Ferrero Lane	-	Cities of Industry & La Puente		
Valley Boulevard / Fullerton Road	6	City of Industry & L.A. County		
Valley Boulevard / Giano Avenue	3	City of Industry		
Valley Boulevard / Grand Avenue	8	Cities of Industry & Walnut		
Valley Boulevard / Hacienda Boulevard	8	City of Industry		
Valley Boulevard / Hambledon Avenue	8	City of Industry		
Valley Boulevard / Hurley Street	4	City of Industry		
Valley Boulevard / La Seda Road	-	City of Industry & L.A. County		
Valley Boulevard / Lemon Avenue	2	City of Industry		
Valley Boulevard / Nogales Street	8	Cities of Industry & West Covina		
Valley Boulevard / Orange Avenue	6	City of Industry & L.A. County		
Valley Boulevard / Proctor Avenue	5	City of Industry		
Valley Boulevard / San Angelo Avenue	-	City of Industry & L.A. County		
Valley Boulevard /Stimson Avenue	5	City of Industry		
Valley Boulevard / Sunset Avenue-7 <sup>th</sup> Avenue	8	City of Industry & L.A. County		
Valley Boulevard / Temple Avenue	4	City of Industry & L.A. County		
Valley Boulevard / Turnbull Canyon Road	3	City of Industry & L.A. County		
Valley Boulevard / Wickford Avenue	-	Cities of Industry & La Puente		
Valley Boulevard / Workman Mill Road /	-	City of Industry & L.A. County		
Valley Boulevard / 2 <sup>nd</sup> Avenue / Vineland Avenue	Puente Avenue			
	6	City of Industry & L.A. County		
Valley Boulevard / Yorbita Road	-	City of Industry & L.A. County		

<sup>\*</sup> Phase information was not available for all signals as of the printing of this document. Information will be updated for inclusion in the Signal Synchronization Study Update.

All controllers in this Table are Type-170, unless noted with asterisks:

\*\* Signal SST controller

\*\*\* Signal utilizes EC controller

- Phasing information for this intersection was not determined at the time this report was prepared.